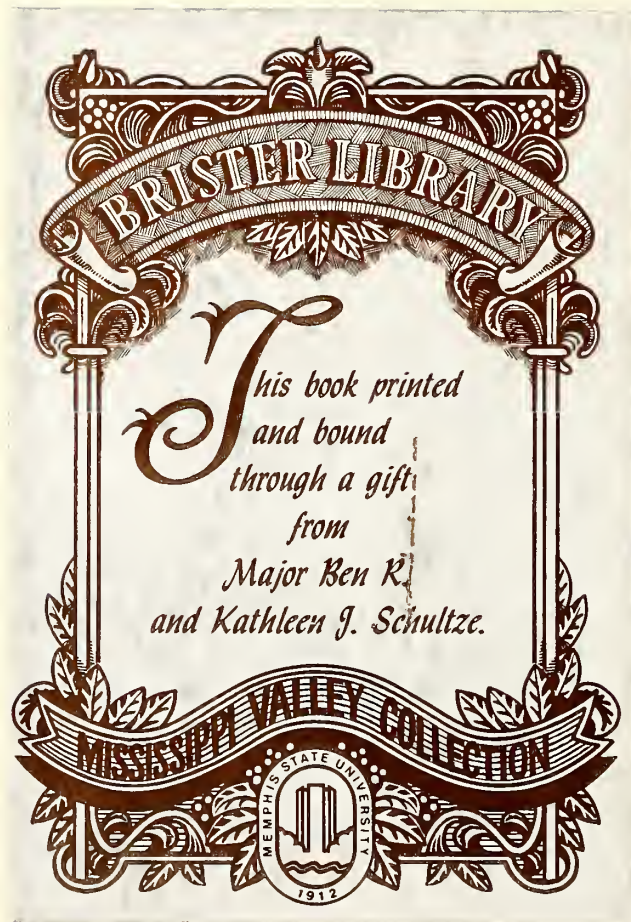


ORAL HISTORY OF THE TENNESSEE VALLEY AUTHORITY
INTERVIEW WITH
MARIO BIANCULLI

BY - CHARLES W. CRAWFORD
TRANSCRIBER - BRENDA MEIER
ORAL HISTORY RESEARCH OFFICE
MEMPHIS STATE UNIVERSITY



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INTERVIEW WITH MARIO BIANCULLI

MARCH 25, 1970

BY CHARLES W. CRAWFORD

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PLACE Chattanooga, Tenn.

DATE Oct 21, 1974

W. Brannith
(Interviewee)

Charles W. Crawford
(For the Mississippi Valley Archives
of the John Willard Brister Library
of Memphis State University)



THIS IS THE ORAL HISTORY RESEARCH OFFICE OF MEMPHIS STATE UNIVERSITY. THIS PROJECT IS "AN ORAL HISTORY OF THE TENNESSEE VALLEY AUTHORITY." THE PLACE IS CHATTANOOGA, TENNESSEE. THE DATE IS MARCH 25, 1970, AND THE INTERVIEW IS WITH MR. MARIO BIANCULLI. THE INTERVIEW IS BY DR. CHARLES W. CRAWFORD, DIRECTOR OF THE MEMPHIS STATE UNIVERSITY ORAL HISTORY RESEARCH OFFICE, AND WAS TRANSCRIBED BY MRS. BRENDA MEIER.

BIANCULLI: I am the son of an engineer-architect and did quite a bit of traveling during my early life, due to my family's activities. I'm a veteran of World War I. In a matter of time I came to the United States. I came to the United States in March, 1924, following my completed studies at the University of Naples, from which I received the degree of Doctorate in Engineering and Architecture. And I came to the United States as the winner of a fellowship sponsored by the Italian and the American governments. Due to this fellowship I received an invitation to work for the Foundation Company of New York as a young engineer. And I was lucky to be assigned in the office of the Chief Engineer with the company. I left to broaden my experience and moved to the Electric Bond & Share Company of New York to design power plants.

In 1926, '27, '28 and '29, having decided to change completely from engineering to architecture, I became a member of the firm of Andrew J. Thomas, in New York, which specialized in housing, especially; but too, we did an awful lot of important work. Among our clients was John D. Rockefeller, Jr. which maintained a very steady flow of work. But the depression of 1929 changed all this, and following the presentation of the proper credentials as to ability, and so on, I obtained an appointment for Assistant Chief Designer in the State of New York, Hospital Division, where I worked for about two years. Not being a civil service employee, I was laid off when funds ran out; but, fortunately, having won a competition for the New York State World War Memorial, the state appointed me to complete the working drawings which kept me busy for several months.

I returned to New York and became associated with several industrial companies as an industrial designer, among which was the Otis Elevator Company. At the same time, I opened an architectural office in New York with my late colleague, Mr. Piero Ghiani, under the name of Bianculli and Ghiani, Architects, New York. We specialized in recreation buildings such as movie houses, built into "demountable" structures, and we had quite some success. This was the time when the opportunity came for me to apply for the TVA. A long time after my application, they finally called me down on a

temporary appointment. I reported in early January, 1936, to accept the position as Assistant Architect with TVA.

The reason for moving from New York to Tennessee was due especially to my enthusiasm for the coming program of TVA, which, although at that time was under a series of court actions before the Federal Courts for the constitutionality of the agency, still was of such great promise and magnitude as to warrant my enthusiasm, as well as the personal sacrifice that one meets when one leaves one city to go into another city without any guarantees of the future.

I have never regretted that because I have found that as the program developed and as my activities in Tennessee developed I have only to be thankful for all the things which have happened to me. Although the road was difficult at times because of the rush of the work, the small size of the staff, and the inevitable conflict of basic ideas--especially when one must think in terms of very costly programs programmed by higher-ups in a pioneering manner--my general attitude about TVA since I left has been one of continuous interest and admiration for the results of such a far-seeing program, due mostly to the quality of the leaders of the agency and their associates. Coming back to the program of that time, although the immediate purposes were basic, such as flood control, conservation, and navigation, it was very far-reaching because it concerned the very future of one of the underdeveloped

sections of our country--the basin of the Tennessee River--the initial territory in which TVA was going to be active. And the health and welfare, and the "pursuit of happiness" of millions of people in seven states, and the impact that this economic move would bring to the nation at large, was a great program, indeed, for which it was well worth leaving a place in New York and come--to be able to say I contributed a little for it, whatever move it takes.

Coming to TVA was an "adventure." Of course it was not a light-hearted adventure--it was a very serious adventure. The state of Knoxville and Tennessee at the time when I came to TVA reflected the poor situation in general. Most of the commercial life, retail outlets and so on, were paralyzed. It was a time when the NRA had been challenged and found unconstitutional. It was a time of complete stagnation of industrial activities and a complete lack of cheerfulness anywhere. It seems impossible or incredible to look back and realize that this is the same place. And it is so nice to think that this--originally what was done 35 or 40 years ago--started from a well planned government program.

This enthusiasm was the main reason why there was a sense of adventure. TVA was fortunate in the misfortune of the country at large because, due to conditions of employment elsewhere, TVA was able to gather under one roof, so to speak, the best talent, in many, many fields--from educational to

economical, legal, engineering fields. We, as architects, enjoyed a great opportunity and the far-reaching purposes of the program. The organization, disregarding some early blind-alley situations, resulted in an organization which recognized architecture as an important part of TVA, because it would reflect physically and functionally, in its planning, the ideas which had been established with the TVA. We had the leaders that saw the wisdom of giving the art of architecture its place and its independence to the point that other agencies of the government soon were asking the question, "how could TVA produce some good architecture when they were not able to do so?" And the answer was very easy. The TVA architects, I mean the designing architects, enjoyed wide independence from the engineering branch of the TVA. I will add that this is not mentioned maliciously against the engineering profession. It is just a matter of cold reporting of a situation that would exist if a "minority" profession were allowed to be dominated by dominant profession which would have been the case. In other words, what I am trying to illustrate is that the architects were able to design TVA work with the cooperation rather than the outside control of the engineering organizations in the TVA, due to the fact that they answered directly to the general manager. And the results were very rewarding. To my knowledge, and even looking back 35 years today, I cannot remember one instance where any significant official in the engineering

department ever complained or showed any hostility, animosity, or hard feelings for the staff or organization. With my resignation from TVA, I understand that the practice has changed--the organization is not as I described it anymore.

Coming down to the basic guidelines of architecture in TVA, and I understood them and as I understand them today, we designing architects were inspired by the feelings in the TVA that something momentous was taking place. Something momentous that would last for decades and that would leave an imprint in the life of America. Therefore, we were very serious and careful in not missing the opportunity to arrange things in such a way, and I mean organically and functionally and aesthetically, so as to not only express itself, but to also last forever as a part of American life.

I'm not only talking about the most impressive landmarks of TVA such as the high dams or the big dams downstream. The TVA architecture covered a very large range of the architectural field of which, of course, the dam and the powerhouses were one of the main and most important tools. We had schools to build and construction camps to build. We had thousands and thousands of workers to house and to feed and to provide with health facilities. We had their families to provide for. The economic results in the TVA area were enormous and spectacular. Millions of people came to see what TVA was doing and how the American dollar was spent. And they went back home

bragging and praising the TVA for what had happened. It was contagious--it was utterly contagious.

Another field that was very important in the TVA, and I don't think is a part of the TVA now because of the seasoning of the TVA operations, was the regional assistance to the communities in the TVA area. The ultimate purpose of the TVA effort was to bring life improvement and prosperity to the region--that means to the cities, to the smaller cities, to the villages, to the farms, to any entity, no matter how small. We architects in our office had a role in this job and I enjoyed that part of the work very much: to be able to travel throughout the TVA lands and visiting with local officials, and consulting with my planning colleagues in order to provide service and opportunities for local benefit. When I look back to those days I think it was very rewarding to have left the canyons of New York for the "backwoods" of Tennessee. I could stop in every little town and shake hands with somebody I had befriended. That was very rewarding.

During the development of TVA, World War II took place (starting in December of 1941). TVA became an important tool in the defense of the country. The work had to be accelerated in spite of the loss of many people who joined the armed forces. And in spite of my effort to join the armed forces, I was rejected because I was a TVA worker, a situation that I still resent. But, I did what I could and we put in

long hours to help in building the facilities that furnished the energy necessary to the war effort. At that time we didn't know but TVA was also furnishing huge blocks of energy to the Oak Ridge facilities of the Atomic Energy Commission for the famous Manhattan Project.

During that time the civilian needs, although curtailed, were not ignored. We had to use great care to operate under war conditions, complying with stiff restrictions of all kinds due to labor and material shortages. Some programs were accelerated, some were even edited as necessary to the war effort and to the future of the TVA land. I am referring, particularly, to the agricultural activities and, especially, I'm referring to the various REA programs which not only helped to reduce the drudgery of the work but increased manifold--the capacity to produce. This was a great step in restoring, or in creating healthy economy in the TVA land.

To further illustrate the importance of this particular activity, it is well to note that during those years our office was, and I was, assigned for part of my time to help the newly organized office of REA in Washington. We assisted the REA in the establishment of agricultural cooperative building facilities, not only in the TVA area, but in the entire country. My office designed, and in several cases even supervised, the construction of many cooperative buildings--maybe 75 or 80 of them; some being farm developments, some refrigerated barges, some cooperative offices headquarters,

some shops, and in two or three cases even some large steam plants. (One of the larger projects was the steam plant near LaCrosse, Wisconsin, where the architect (meaning myself) was in Knoxville, Tennessee; the engineers were in Clayton, Missouri; the general contractor was in Eau Claire, Wisconsin; and the building was in Genoa, Wisconsin, 20 miles outside of LaCrosse, Wisconsin. This particular project, then, cost about \$1,500,000.) This is mentioned in order to indicate the TVA ability to assist in other rational programs, not only in the TVA territory, but outside of the seven states; to help other agencies, not only in the South, but anywhere in the United States and even abroad. This was in no way a small contribution of TVA to the war effort during the war years.

Technically the philosophy of the theory of architecture was a simple one. The war helped to employ additional ingenuities in order to circumvent some of the difficulties of the war time and still maintain some very strict, rigid schedules for delivery of necessary war tools. The architects (and I mean the designing architects because if I am allowed to make a parenthesis I will make a distinction between the designing part of the architectural picture and the carrying through of this design to the necessary drawings and papers and documents for the actual building of the facilities) the designing part of architecture is, or should be, a happy marriage of many things, besides a very clear ability of approaching a problem

with practical knowledge of what projection this stage of conception will lead to in the many necessary adjuncts of the problem, such as the cost of it, the complications due to interfering, heterogeneous elements to it, and the sequence of operations.

One must have the clarity of knowing how to arrange the basic elements of a design so as to implant the seed of functionalism and economy--at that time, leading to a satisfactory result which would instigate and be a part, without any friction with other exigencies of the problem which at that time did not exist. This must be done without losing track of acceptable aesthetic qualities of the final product. By aesthetic, meaning not so much the personal liking or disliking according to one's judgment of certain features of this product, but to maintain an acceptance of the result without falling into any pitfalls or fads, or bizarre or capricious deviations in the presence of easiness of construction, economical costs, and most of all, functionalism. Is that what you want to know?

CRAWFORD: Yes, sir.

BIANCULLI: The second part mentioned above--meaning the development of architectural documents and drawings for the execution--although a very skilled one and very complicated at times, it is still a mechanical procedure which

with some discipline can be maintained, which also may require originality to develop, but is not comparable to the first part mentioned because it deals more with the mechanics of developing a concept than with the concept itself.

I was privileged to be entrusted with the architectural design of most of the great elements of TVA, meaning the dams and the power houses, etc. I was also privileged, since my retirement from TVA in 1945, to have been commissioned as consultant for several engineering corporations, my work being in the western part of the United States, and the Columbia River in Texas, in Georgia, and abroad in Iraq, in Afghanistan, in India, in Iran, in the Philippines, in Venezuela, the most recent being The Guree Dam in the tropical part of Venezuela. In my days with TVA I had the part in my work of designing about 26 large projects for the TVA. Since my retirement I guess I've added another 15 or so, which whether I like it or not, makes me an "expert" in power house architecture.

In the TVA we initiated, fought, and won battles, introduced methods of construction, teaming up with our engineering colleagues. The examples of TVA engineering and architecture are still followed by very large, private engineering firms. This is another contribution of TVA to the profession of architecture and engineering which, of course, was to be expected. Most of these eminent engineers that once worked for TVA are now principals in large engineering firms and their

TVA experience, and incidentally their relationship with the architectural talent of TVA, is still being continued. I took upon myself to record some of my professional experiences in the TVA work by writing articles which appeared in professional technical magazines, some in collaboration with some of my colleagues, engineers, and planners.

Also, since I left the TVA, I was privileged to be invited by the U. S. Department of the State in September, 1957, to go abroad and I visited Italy during that time. Well, I made 6 or 7 lectures before technical groups on different subjects, two of which were exclusively on the TVA architectural contribution to world architecture. I still receive correspondence from abroad and I'm still furnishing information to my correspondents.

CRAWFORD: Mr. Bianculli, when you went to Knoxville and went to work for TVA first in 1936, what size architectural staff did the authority have?

BIANCULLI: Have you been to Knoxville? You know their officers?

CRAWFORD: Yes.

BIANCULLI: Well, I don't know. I haven't been there for 35 years so I don't know now what their architectural

staff consists of. In 1936 the Planning Organization was the Department of Land Planning and Housing. They were very urgently working on housing for TVA construction employees and their families. They were working especially at Norris, Wheeler, and Wilson Dam. At the time when I arrived Norris was being still built. And Norris Dam, Wheeler Dam and Pickwick Dam were under construction.

The TVA was built around the board, the general manager, the chief engineer, and then all the departments of the division were being organized. The TVA was still in a stage of formation as far as personnel was concerned. And the architectural part was a section of the so-called land planning and housing department which was headed by Earl S. Draper.

CRAWFORD: Yes, sir. He's retired in Florida now.

BIANCULLI: Oh, is he? Earl Draper is a very, very excellent executive--a very brilliant man. I'm really very happy to have had the privilege of knowing him. He was a real executive and very aggressive with his ideas.

CRAWFORD: Yes, sir. He's at Vero Beach, Florida.

BIANCULLI: I'm so glad to hear. I knew his children too. I was much younger than he is, but older than his children.

CRAWFORD: One of his sons has retired from the Marine Corps and is there also.

BIANCULLI: I know him. Retired from the Marine Corps?

CRAWFORD: He is at Vero Beach also, teaching I believe.

BIANCULLI: He had four sons, I think.

CRAWFORD: I suppose this would be the older one.

BIANCULLI: Yes, I remember them--the first two or three of them I remember very well. Well, to go back to the architectural section as it was. There was an awful lot of traveling going on. Mr. Roland Wank was in charge of the architectural section. The department was, as I said, in the formation stage, the best I could tell. It was not divided officially in parts like it developed later on, but had, I would say, about six or seven architects. And there were two or three architectural draftsmen. And most of those architects and architectural draftsmen were busy doing housing and camp work for the workers that were to be housed to build the dams and such. And they had special items to do. There was a very fine architectural engineer, I think he was. A man by the name of Granger--do you know him?

CRAWFORD: No, sir.

BIANCULLI: I don't know where he is. I haven't seen him in about 20 years. He was a very quiet, sensible man--a very competent man. He had some supervisory authority, but he was not over me. The main time while I was there I was assigned to Mr. Wank and Norris, Wheeler, and some of the Muscle Shoals project. And that was the seed of the design department really because the other architects were working on housing almost exclusively. But Wank for some reasons selected me--I mean I was not officially assigned--but I got all the work for that particular assignment, for the dams. I never did work on houses or camps or anything like that.

We had some mechanical engineers, some plumbing engineers, some electrical engineers. We had a little of all kinds of people. Some of them are practicing in Knoxville. Benninger is one of them. He is a mechanical engineer up there. One of them is in Florida that I know of. He's a very old man; I think he is retired. I'm talking about 35 years ago when I was a very young architect myself. Well, that was my assignment and I kept going with that assignment and developed within it. I mean, the assignment became bigger and bigger and of course with just myself under Mr. Wank. At some stages we had as many as four people, but we never were more than four or five people.

CRAWFORD: Where did you recruit the others? What sort of people were they?

BIANCULLI: Well, the personnel department recruited. They sent the files to us. We selected whomever looked promising to us. Sometimes we hit; sometimes we didn't. It was not, what I would say, a scientific way of doing it. It was more of a hit and miss. Let's not forget now that the war started in 1941, and of course the field got smaller all the time for available architects. Due to the increase of assignments I was very over worked. I worked 12 hours a day for years.

CRAWFORD: And there was no over-time for that?

BIANCULLI: No, of course not. In fact when I came to my own private practice here (I've been in this office now it is 25 years) I still work 12 hours a day 5, 6, 7 days a week--seven days a week. And, although my wife still complains and I say now this is my business and I have a personal responsibility, she says, "When you were with TVA you did the same thing." But at that time it was also Mr. Wank. Do you know Mr. Wank?

CRAWFORD: I hope to interview him.

BIANCULLI: I don't know where he is now; I haven't seen him in 23 or 24 years.

CRAWFORD: He is with a firm in New York City. Wank, Slavin, on 42nd Street, I think.

BIANCULLI: That's the successful firm where he was employed before he came to TVA. Mr. Wank is a very intelligent sort of a man. You ask me the organization--what it was. Now with the time going on and things being more organized they changed the situation. And, of course, the department even took a different form. We had in there an economist, Mr. Durisch. Do you know him?

CRAWFORD: No, sir.

BIANCULLI: Oh, you should know him. He teaches at U. T. (University of Tennessee). You should have put him on your list.

CRAWFORD: What is the name?

BIANCULLI: Well, Durisch is all I remember. He was in charge of taxation and things like that. Do you know Lee Greene in Knoxville? Dr. Lee Greene is a Dean at U. T. in Knoxville.

But we had everything from economists and legal people--some of them--to planners, to engineers, architects, draftsmen, and all kinds of educational experts. And the department went through a lot of adjustments in the program to the extent that it kept all of us fluid because it was an expanding program all the time.

Now eventually, and that means maybe 1940 I would say--1939 even--the architectural activity was split up and our office became the staff architect office which was in charge of design--and we belonged to the Department of Planning directly under the General Manager. Then there was a group under the same department that continued to be interested in housing, especially prefabrication and new techniques and the utilization of materials due to wartime conditions. The remarkable demountable housing that you have perhaps seen at Fontana Dam; that was developed by those engineers, architects. Eventually they came under my supervision technically, but not administratively.

That's when the architects were free of the control of the chief engineer. Several reorganizations developed another "parallel" architectural office or unit which was part of the engineering department under the chief engineer. Now, the proceeding was this: (This is very important. I repeat, this is very important for what you want to know about architecture, architecturally important I mean.) The project

was approved and initiated, which of course was a process of many months of study by the engineering planning departments of TVA. I mean the architects didn't have anything to do with that. That included the water, geography, with water utilization, geology, feasibility, energy production and economics and such. All right, then we became involved at the same time the engineering studies evolved into some preliminary shape in several alternatives. Our office--that means mostly me--went to work to design the architectural design, and I don't mean just the envelope. I mean the flow lines of the various functions of the project, especially as they related to the human activities and relationships therein, and the human "presence"--the engineering aspects, and there were many, were developed and controlled of course, by the very fine Engineering Department, which included several engineers of great talent in their own specialty. I might say that the human element was our main specialty. We took care of the human requirements and, so to speak, incorporated as soon as possible in the projected package. To firm the package we followed the project in the engineering department and we thrashed the problem informally together. So if the structural engineer and the mechanical engineer and anybody else requested certain conditions at that stage we had the preliminaries by the early schematic plans subject to all our studies and contributions, so

that we would set our work within the framework of the complete integration and we would all work together. We just gathered information and worked the coordination with each other. And we produced a design which would follow through the channels and eventually was approved by the General Manager.

CRAWFORD: Were you able to work well with the engineers?
Was there any difficulty between the architects and engineers?

BIANCULLI: Well, there has always been a feeling like between the blacks and the whites, between the birds and the fish maybe, you know? And that's inescapable; that's human nature; but not impersonal--I mean I always got along with everybody beautifully. In fact, I'll say this: right now I'm very proud to tell you that I have more friends among the engineers than among the architects. That is the proof of the pudding. And I am a very accomodating sort of a fellow. I am used to give and take and I took an awful lot, but I gave an awful lot too. But the result--I never got in trouble with anybody. We all got along beautifully, technically speaking, beautifully. My best friends are the engineers.

Now, you are talking about the organization. Now the center of the organization in the Engineering Department was Mr. Tour. We kept him informed and finally he received our designs and once it was approved he was in charge of

producing the documents, the working drawings, the specifications, and all that to fit, to comply with the design. When he was through with his work, which was a period of months (It was a very large job. He had a staff, I would say, of about 10 or 12. It would be more sometimes.) his work would come to my office for my signature to make sure that Mr. Tour's work complied with our designs. Excuse me for being so positive, but that's the way it was. And I can prove this because it's written in my description--personnel description. If you care to see it I will show it to you. All right, therefore, and during the preparation of those drawings they ran into snags, naturally, and they came to our office to consult with me. So, technically I did not have any supervision over Mr. Tour's office, but we had the final say. There were complying with our design (which was my design).

Now when I left (this was true until I left) I gave the TVA six months notice because I realized it was very difficult for someone to step into my job, which by that time was very complex, because in addition to my architectural work I was sitting in an awful lot of administrative meetings.

CRAWFORD: What dams did you have underway then?

BIANCULLI: Well, my last job that I was in charge of completely by myself was Fontana Dam. That was my last dam.

I did the preliminaries for South Holston which I prepared before I resigned. Fontana Dam was the last very large dam that I had much to do with. I will show you something about Fontana Dam because I spent some of my vacation time executing several paintings of construction activities on that project. I hope the originals of my paintings are being preserved as documentary material for the history of TVA.

CRAWFORD: I would like to see them.

BIANCULLI: I think they are the only ones in existence because I recall they seem to have been misplaced completely with TVA, so I don't know where the originals are. I kept a record here and I have some photographs of them.

CRAWFORD: What was your favorite dam? Which one do you believe had the best architectural appearance?

BIANCULLI: Well, that is hard to say. A dam is not that kind of an animal. I mean you don't build a dam because it's your favorite. The approach is similar to a doctor that is called to Marilyn Monroe's bed to operate for some feminine troubles, and to him it's just work, that's all. I don't mean to be so detached and I certainly am not like that, and I don't want to sound detached. Sure, without any question in my mind

I think Fontana, due to its physical dimension--it's four-hundred feet high. It's a tremendous hunk of concrete. There's some terrific ecology around it and it has what I think is a very attractive power house with a very attractive public accomodation building. It's got an awful lot of features that makes a complete dam in my mind. But Kentucky is a dam even bigger than Fontana in purpose although it's not as impressive because it's a flat kind of a dam. Architecturally speaking, I contributed to most of the designing of Kentucky, Gunter'sville, of Chickamauga here, Watts Bar steam plants and hydro plants, Fort Loudoun, Norris, Wheeler--all of them. Modestly, I can claim part of the credit without exaggeration. They represent all different types of dams. I think Fontana is dramatic. It's part of a drama and the construction of it was really a whopper. It was just spread all over that mountainous section. It was terrific. It just moved you, therefore. I have some photographs I'll show you. But I mean that was the organization and of course that's only with TVA. I've helped to design bigger dams than that--than TVA--and one in Iran (Karadje Dam) is twice as big as Fontana. (That's near Teheran.) It's quite a hunk of concrete too. And, of course, TVA has done a lot of power work since I left, but more of the steam plant type and now of course they're going into nuclear energy production. But, most of the work I did for TVA, except for the Watts Bar Steam Plant, was for hydro plants. I've done some steam plants for the REA, and I've done quite a few steam plants since I left TVA.

CRAWFORD: When did you do your first steam plant? Which one was it?

BIANCULLI: You mean for TVA?

CRAWFORD: Yes, sir.

BIANCULLI: Oh, that was in 1936 and the reason is that I had, as I mentioned before, experience in power plants because way back in 1926, I worked for the Electric Bond and Share Company and I designed three or four power houses for them while I was there.

CRAWFORD: Did you have your experience with Electric Bond and Share in mind when you went to TVA? Did you think that would help you?

BIANCULLI: No, at that time TVA didn't exist.

CRAWFORD: When you first accepted the TVA job in 1935 or 1936, did you think then it would be of value to you?

BIANCULLI: Well, I thought it was very valuable to me when I filed for TVA. I didn't file for TVA because I needed a job, Doctor. I filed for TVA because I wanted to be

a part of TVA.

CRAWFORD: Yes, you were in practice then in New York.

BIANCULLI: I was in practice with a firm up there and quite prosperous. I gave my office to my partner, abandoned my apartment, junked my furniture, and came to Tennessee.

CRAWFORD: Who brought TVA to your attention? How did you learn about its architectural work?

BIANCULLI: Well, people who read the papers read about things. So that's the way I learned. Nobody in particular told me about it except my keeping in touch with what was going on. Also I'll say I remembered this too: I remembered in New York there was an old friend of mine he said, "This time I'll take a vacation down to TVA land," and he came back and said it's a beautiful land; that's all. But I don't think it was TVA. TVA did not exist then. I knew people from the South, so I more or less had an idea what the South was and frankly I didn't come to TVA because of the South. It was for the TVA general program.

CRAWFORD: Was it the architectural opportunity?

BIANCULLI: Well, not architectural either. As I said, my interest is planning. It was the great importance of TVA to our Country. To say that I've done something for this thing and I lived with it, to be able to say I was part of it. That's what I think now. Architects--there are some of us that are mercenary, like there are mercenary lawyers and mercenary doctors. Thank God I am not one like that. Otherwise I wouldn't be in Chattanooga. I'd live in New York or some place else--California, someplace where I could really make some money. Down here we make a living, a gracious living, a good living--all we want--but I didn't go with TVA knowing that I was going to make a fortune in the TVA land because there is not that much money around, as you well know, in the Tennessee zone, for an architect.

CRAWFORD: But it has improved a great deal.

BIANCULLI: It has improved.

CRAWFORD: Can you tell me something about your first arrival in the South--your first arrival in Knoxville and what impressions you had?

BIANCULLI: Well, I arrived by train. It was the second or third day of January, 1936. And I experienced the

trip with snow from New York to Knoxville and beyond. I never saw any land. I saw a white mantle of snow from New York on. And I thought I was going South when I came to Knoxville. I said, "this is some South." There was a yellow smog all over the place and I checked into this miserable hotel with a big, dingy, dark room with a trio of coffee tables in there. That's where they served the breakfast of scrambled eggs that I can still taste in my mouth. So, I frankly wasn't too enthusiastic the first or second day. As I said before, it took a little fortitude to last a few days, but then, as you well know, the South has got a subtle way of getting to you. You start to get ingrained and dedicated to your work. I didn't do much running around because there was too much to do. I had to learn an awful lot. I didn't come down here to go around; I came down here for the TVA, so I didn't kid myself. I worked at nights. Nobody asked me to be there; I just wanted to learn my job. So really the South didn't have any affect on me until the good season came and that's when I started to see more. Coming from New York (particularly in Brooklyn) I was not used to seeing lawns and trees in New York except at the Rockefeller Center. There were four or five trees around there, so when springtime came I enjoyed it. And then I had an accident, incidentally. I had an automobile accident that crippled me for a while and I enjoyed it--having that rest--because I was in a cast. And I had accumulated enough vacation time to go

on a trip to Europe, you know, and came back. Everybody wanted me back. I mean I was part of this place.

CRAWFORD: What effect did World War II have on your material?

Did you have a shortage of material for building?

Did you have to change your plans because of that?

BIANCULLI: Well, we had two kinds of basic restrictions. One

was the amount and kind of materials people use in a building of a certain type and the other was compliance with the regulations of war agencies to allocate materials for that project. If one didn't comply in the restrictions from the very start, one ran the risk of just being able to obtain materials for your project. So you'd better work right the first time to make the building acceptable and in compliance with all the rules and regulations. So much work was redone in order to comply with the changes in policy of the war agencies.

CRAWFORD: Did you follow, essentially, the same kind of architectural plan on all the dams?

BIANCULLI: No, of course not, with one exception. I say "of course not" basically. A dam is too expensive a tool to run the risk of not fitting to some things. It would have to be revised to a great extent, which might make the

project uneconomical if you don't start right. The dam is geared to too many things to be repetitive. It's geared to the river, of course, to the river itself. It's geared to each location on the river. It's dictated by the economics of the cost, the utilization of the natural elements, the balance of advantages and disadvantages and what effect it will have on the river. The dam site itself is a problem whether it's a high dam or a low dam. It depends an awful lot on the geology of the damsite, on the condition of the flow of the river in that particular place, but principally on the far reaching purposes of the project.

The sequences of the operation of the construction of a dam, the feasibility of a diversion channel for instance, might affect a location for the dam. Moving from one side to the other might affect the height of the dam, might affect the number of cubic feet per second that is discharged into the penstock which affects the eventual economics of the project because each foot of water is worth millions in energy revenues. If it goes to waste in case of flood protection it will affect the dam's storage.

CRAWFORD: You were very conscious of the cost of all this, weren't you?

BIANCULLI: Well, we didn't do that part of the work. As I said before I was conscious of it but I didn't do

that part of the work. No architect does that part of the work. That work is done by the advance engineering staff, basically by the hydraulic engineers, geologists, and administrators--and engineering administrators--that work out the basic schematics, and the economists, and people like our good friends in Washington that set the rates and things like that because the economy controls it.

CRAWFORD: Yes.

BIANCULLI: Those are the characteristics of a dam. After many trials, they might have ten different sites, you see. They'd have to find out, for instance, if the rock is good rock to receive and support the dam in case of a high dam or any low dam too, or whether it's not. Now, in some cases like Chickamauga or Norris, there's an awful lot of them that you don't see. It's in the ground--Norris, we had caves in the rock that we had to fill up with concrete. A very expensive procedure. Chickamauga, the same way. You cannot rest a concrete bed on mud; you've got to be sure there is no short circuiting or water that might undermine the stability of the dam. It's too expensive a cost to pay and that's why you'll notice in the TVA system, for instance, a dam like old Hales Bar was completely demolished by TVA and another built close to it.

CRAWFORD: Why was that, sir?

BIANCULLI: Well, it was an old dam that wouldn't fit into the system. I mean if a dam is part of a system as it should be, naturally, there is no use taking care of one person when you might damage four people. So, an over-all solution must be found, especially in a multipurpose system like TVA. I've always heard that Hales Bar was built mainly for production of energy. It never did fit into the TVA integrated program, so TVA kept correcting and patching. The problem of navigation also became critical. I understand there were water leaks (which are very costly) and problems of foundations. I think eventually they found out it was cheaper to build a new dam than to repair an old one. Maybe the site was not in gear with the rest of the system. In other words, the whole system was being penalized because of the nature of one dam.

CRAWFORD: How were the TVA dams different from those built earlier, such as the ones built by the Corps of Engineers?

BIANCULLI: Well, I don't want to mention the Corps of Engineers because they have been my good clients too. But, generally speaking, and I'm talking about even the work I did many years ago when employed by the Electric Bond and Share Company. In that case, the design consisted of a more

or less standardized cover on a bunch of machinery. The Power House Building was one thing more than an assembly of pseudo-architectural elements put together just to recognize the fact that it was done by the Electric Bond and Share Company. These buildings all had the same mark, never minding what happened to themselves. They were nothing but a surface frosting so called beautification. They were not, architecturally speaking, honest, sincere, or anything like that. Because they didn't look or function like power projects--they might look like a post office at the base of a dam--they had no relationship to the other elements of the project.

In the TVA architecture one thing we did successfully was to integrate the design of all the parts of the project so that it would belong to the whole.

CRAWFORD: I've noticed that at Norris.

BIANCULLI: And it would not be just the nose of the son that would look like the nose of the father. I don't mean that. I mean by that that as far as I know of (I don't know about the other architects) but as far as I know the work, when I did the work for the TVA, I could really defend--architecturally defend--what I had done, why certain things were done. You might have an indoor type, semi-outdoor type, and outdoor type power house. It's that different.

I have the personal experience of a very large project, the design of which was initiated by some other architects. They had covered up every part of the project with their little buildings. They had about six or seven buildings--a big power house and a little pump house here and a gate house over here. When they called me in as a consultant--a very large engineering firm (internationally known for resource development projects) the engineers didn't believe me when I told them that instead of recommending all those buildings, I was proposing to eliminate all those little buildings by consolidating and unifying the various elements of design. It saved many thousands of dollars.

On the same project somebody had the idea that they had to have some crenellation at the top of the dam. I said, "well, what has this crenellation got to do with the far reaching purposes of the project?" And this official looked at me and said, "Why, it's architecture." And I said, "it isn't my architecture." So the first thing I did was to save them half a million dollars there, by eliminating the useless crenellation. I did that continuously.

CRAWFORD: That certainly paid your consultants fee or more.

BIANCULLI: Well, I think they still owe me some money. They owe me a lot of money then, if its on that basis.

CRAWFORD: What were the conflicts of basic ideas about
 architecture in TVA?

BIANCULLI: Well, I want to finish up saying one thing that
 you asked me before. I didn't have a chance because
I was interrupted by the telephone call. But, if some dams
are alike; I know only one case where the TVA with minor
modification used the same basic plans for two different dams
and that was the Cherokee Dam and the Douglas Dam which were
built about the same time, and they were built under the terrific
pressure of World War II. Douglas Dam, I think, came later
and they are almost alike except for the number of piers. One
has one more gate than the other I think. That's the only
exception I know.

 On the Columbia River (this is not TVA, but my work
since TVA) there are two dams about 18 miles apart on the Columbia
River. One is the Priest Rapids Dam. (I'll show you some
pictures of it.) And another one is the Wannapum Dam. There
are big dams--they are bigger than TVA dams--on the Columbia
River. They might be called similar because they are both low
dams, I mean low dams doesn't mean very low, comparatively low.
They're not high dams, that's what I mean. But their
characteristics are different you see. But, I mean it's the same
type of tainter gates, the same type of decks, the same type
of fish ladders, the same type of docks, etc. which we don't

need in TVA. We don't run fish ladders. You know what they are?

CRAWFORD: They need them for salmon in the Columbia River.

BIANCULLI: Correct. They cost a lot of money. Added to the job cost about \$30,000,000 just for fish ladders. You can buy a lot of fish with that. I'm sorry but I wanted to answer that question.

CRAWFORD: Yes, sir.

BIANCULLI: Now, the next question was what . . . the conflict?

CRAWFORD: Yes. What conflict of basic ideas?

BIANCULLI: Well, thank God architects always have different ideas. In other words, I always believed that if two men have the same ideas one of them is useless. I welcome different ideas and despite that sometime my speech might be a little strong, in spite of that I think I have the full understanding of the other fellow's viewpoint, especially if I respect him. And I can say I respected most of my architect friends in TVA. There are some exceptions--some of them I didn't respect because they did not deserve any respect, because they were not architects in the first place. They

were what you would call bureaucratic expeditors. You see, they're really not architects. It's easy to tell somebody "push, push and do it"--I mean without telling him how to do it. You give a pencil to the fellow and you say, "Now you show me how to do it," and he is lost. I've used that technique many times with great satisfaction. I had one of those architects arguing with me one time and he tried to make my life miserable by telling me what to do and I gave him a pencil and a piece of paper and said, "Now show me what you mean," and he was completely lost. It was a beautiful experience for me, not for him. But usually I have respect for the architects viewpoints, naturally. Everybody has got some good ideas; I mean you've got to borrow from the sum total of ideas of one person against the other and try to filter the good ones and put them all together. Just because somebody has got some idea that doesn't work, that doesn't mean that he is no good completely.

So, in the TVA I don't think there was much occasion for that type of difference of opinion. I never had any unpleasant experience about that. Maybe except once when the other architectural department--that was regarding the Guntersville Dam--tried to by-pass our designing office and push their design without even advising us that they were designing it. This was against the rules of the TVA. When they produced the design, of course, we objected. That's the only time, I think. We went to the general manager and let him

decide. They appointed a big architect from Detroit to judge the two designs after we prepared ours, and ours was selected and built. That was the end of it because it proved that architect expeditors like Mr. Tour had better stick to their knitting. That's the only time that I can think of. But with the engineers, it is different. You always find somebody that's got some preconceived ideas. I remember at the end of Fontana Dam we were going to build a bridge below the dam. Have you been there--to Fontana?

CRAWFORD: No, sir. I hope to see it this summer.

BIANCULLI: I see. Well, there's a bridge below the dam and at that time the building materials were very scarce--after the war too, for a long period of time. So we re-used the structural steel that had been part of the false work, meaning the platforms and trestles and decks to build the dam. That steel we used to build a bridge with and TVA won the first prize of the Steel Institute. But I had a difficult time to have any ideas adopted by a certain engineer who was in control of the job. He gave me a heck of a time but not because he was right. Being an engineer myself I went back to study bridge design and I was able to argue my points. That was the end of it. My ideas were finally adopted and TVA got the first prize of the U. S. Steel Institute (the said engineer and myself are still good friends).

Fontana Dam: my biggest regret when I was with TVA was that we got the first prize--the award of honor--for the Fontana reception building for the visitors which was on top of the dam, at the VIII Pan American Architectural Congress. That was many years ago . . . It must have been 1948 or 1949.

I learned later that this TVA architect in charge of production of the working drawings, and who had a very minor part in the design of this project, hung the award certificate in his office, as tho' he had earned it. He also claimed authorship of the design of the many projects I designed. I wrote him a stiff letter to straighten the record . . . which he answered with a very weak letter full of excuses--it was disgusting. Well I guess you find this kind in any large organization, and TVA had its share--inevitably. What I have is the satisfaction to have done my job to the best of my ability, and to have contributed even in a small way to the materialization of the TVA program.

CRAWFORD: Thank you, Mr. Bianculli.

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